

FILE 'HOME' ENTERED AT 16:58:19 ON 15 APR 2005

=> file biosis caplus caba agricola

=> s salt and plant and potassium

L1 5807 SALT AND PLANT AND POTASSIUM

=> s salt and toleran?

L2 25179 SALT AND TOLERAN?

=> s l2 and (plant or tomato)

L3 11109 L2 AND (PLANT OR TOMATO)

=> s l3 and (fruit and potassium)

L4 130 L3 AND (FRUIT AND POTASSIUM)

=> duplicate remove l4

L5 98 DUPLICATE REMOVE L4 (32 DUPLICATES REMOVED)

=> d ti 1-50

L5 ANSWER 1 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN

TI Use of Arabidopsis thaliana Na⁺/H⁺ transport protein for improved
salt tolerance in transgenic **tomato**
plant fruit with elevated **potassium** levels

L5 ANSWER 2 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Nitrate improves growth in **salt**-stressed citrus seedlings
through effects on photosynthetic activity and chloride accumulation.

L5 ANSWER 3 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN

TI Tamarindus indica L. seedlings are moderately **salt**
tolerant when exposed to NaCl-induced salinity

L5 ANSWER 4 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Supplementary **potassium** nitrate improves **salt**
tolerance in bell pepper plants.

L5 ANSWER 5 OF 98 CABA COPYRIGHT 2005 CABI on STN

TI Ameliorative effects of **potassium** phosphate on **salt**
-stressed pepper and cucumber.

L5 ANSWER 6 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Soil salinity and water status affect growth of Phoenix dactylifera
seedlings.

L5 ANSWER 7 OF 98 CABA COPYRIGHT 2005 CABI on STN

TI [Tomatoes and salinity: yield, growth and mineral allocation].
Pomodoro e salinita: produzione, sviluppo e allocazione dei minerali.

L5 ANSWER 8 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Physiological responses of pepper to salinity and drought.

L5 ANSWER 9 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI The rootstock effect on the **tomato** salinity response depends on
the shoot genotype.

L5 ANSWER 10 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN

TI Enhancement of **salt tolerance** of pepper plants
(Capsicum annuum) by grafting

L5 ANSWER 11 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on

TI Growth responses on varying soil EC and selection of **salt**-
tolerant rootstock of **tomato** (Lycopersicon spp.).

L5 ANSWER 12 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on

- TI Salinity reduces growth, gas exchange, chlorophyll and nutrient concentrations in diploid sour orange and related allotetraploid somatic hybrids.
- L5 ANSWER 13 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Alleviation of salinity-induced stress in cash crops by Multi-K (**potassium** nitrate), five cases typifying the underlying pattern.
- L5 ANSWER 14 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN
TI **plant** transcription factor genes identified by sequence homology and their use in improving environmental stress **tolerance**
- L5 ANSWER 15 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
TI Mycorrhizal influence on **fruit** yield and mineral content of **tomato** grown under **salt** stress.
- L5 ANSWER 16 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
TI **Salt tolerance** of **tomato** plants as affected by stage of **plant** development.
- L5 ANSWER 17 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
TI Expressing the yeast HAL1 gene in **tomato** increases **fruit** yield and enhances K⁺/Na⁺ selectivity under **salt** stress.
- L5 ANSWER 18 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Response of **plant** yield and leaf ion contents to salinity in grafted **tomato** plants.
- L5 ANSWER 19 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI **Salt tolerance** of apricot trees.
- L5 ANSWER 20 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Growth, sodium, and **potassium** uptake and translocation in **salt** stressed **tomato**.
- L5 ANSWER 21 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
TI Response of two greenhouse pepper hybrids to NaCl salinity during different growth stages.
- L5 ANSWER 22 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Effects of NaCl salinity on growth and yield of two pepper cultivars.
- L5 ANSWER 23 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Effects of increasing NaCl concentration on stem elongation, dry mass production, and macro- and micro-nutrient accumulation in Poncirus trifoliata.
- L5 ANSWER 24 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Growth, water use efficiency, and sodium and **potassium** acquisition by **tomato** cultivars grown under **salt** stress.
- L5 ANSWER 25 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI NaCl responses in **tomato** calli and whole plants.
- L5 ANSWER 26 OF 98 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
TI Influence of magnesium and salinity on **tomato** plants grown in hydroponic culture.
- L5 ANSWER 27 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
TI A molecular linkage map of **tomato** based on a cross between Lycopersicon esculentum and L. pimpinellifolium and its comparison with other molecular maps of **tomato**.

L5 ANSWER 28 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN
 TI **Tomato** and salinity

L5 ANSWER 29 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 9
 TI Influence of NaCl salinity on growth and mineral uptake of lulo (*Solanum quitoense*)

L5 ANSWER 30 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI Physiological and anatomical disturbances induced by chloride salts in sensitive and **tolerant** citrus: Beneficial and detrimental effects of cations.

L5 ANSWER 31 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI Effect of some organic and amino acids on alleviating the adverse effects of salinity on El-Hamawy apricot seedlings.

L5 ANSWER 32 OF 98 CABA COPYRIGHT 2005 CABI on STN
 TI Importance of Na content and water status for growth in Na-salinized rice and **tomato** plants.

L5 ANSWER 33 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI Growth, gas exchange, and mineral relations of black sapote (*Diospyros digyna* Jacq.) as influenced by salinity.

L5 ANSWER 34 OF 98 CABA COPYRIGHT 2005 CABI on STN
 TI Role of rootstock and scion on root and leaf ion accumulation in lemon trees grown under saline conditions.

L5 ANSWER 35 OF 98 CABA COPYRIGHT 2005 CABI on STN
 TI Short-term and long-term response of mycorrhizal and non-mycorrhizal olive plants (*Olea europaea* L.) to saline conditions.

L5 ANSWER 36 OF 98 CABA COPYRIGHT 2005 CABI on STN
 TI [Effects of NaCl treatments on ion metabolism in some grapevine rootstocks].
 Baz asma anaclarnda NaCl uygulamalarnn iyon metabolizmas uzerine etkileri.

L5 ANSWER 37 OF 98 CABA COPYRIGHT 2005 CABI on STN
 TI Potash facts.

L5 ANSWER 38 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI The pepino (*Solanum muricatum* Ait.): An alternative crop for areas affected by moderate salinity.

L5 ANSWER 39 OF 98 CABA COPYRIGHT 2005 CABI on STN
 TI Effects of NaCl induced salinity on growth, chemical composition and water relations of two almond (*Prunus amygdalus* L.) cultivars and the hybrid GF-677 (*Prunus amygdalus* x *Prunus persica*).

L5 ANSWER 40 OF 98 CABA COPYRIGHT 2005 CABI on STN
 TI Changes in free polyamine levels induced by **salt** stress in leaves of cultivated and wild **tomato** species.

L5 ANSWER 41 OF 98 CABA COPYRIGHT 2005 CABI on STN
 TI The potential of using K/Na ratio as index of salinity **tolerance** in **tomato**.

L5 ANSWER 42 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI Evaluation of monthan banana under saline water irrigation conditions.

L5 ANSWER 43 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Effect of salinity and Ramsey rootstock on ion concentrations and carbon dioxide assimilation in leaves of drip-irrigated, field-grown grapevines (*Vitis vinifera* L. cv. Sultana)

L5 ANSWER 44 OF 98 CABA COPYRIGHT 2005 CABI on STN DUPLICATE 11
 TI Assessment of **tolerance** to **salt** stress in Kenyan

tomato germplasm.

- L5 ANSWER 45 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Inorganic solute content in **tomato** plants cultivated under salinity conditions.
- L5 ANSWER 46 OF 98 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
TI Long-term effect of irrigation with saline water on the development and productivity of jojoba clones.
- L5 ANSWER 47 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Fluxes of Na⁺, K⁺ and Cl⁻, and osmotic adjustment in *Lycopersicon pimpinellifolium* and *L. esculentum* during short- and long-term exposures to NaCl.
- L5 ANSWER 48 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Salinity influences photosynthetic characteristics, water relations, and foliar mineral composition of *Annona squamosa* L.
- L5 ANSWER 49 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
TI Root-zone sodium chloride influences photosynthesis, water relations, and mineral content of *sapodilla* foliage.
- L5 ANSWER 50 OF 98 CABA COPYRIGHT 2005 CABI on STN
TI Calcium and **potassium**-enhanced growth and yield of **tomato** under sodium chloride stress.

=> d bib abs 27 24 17 1

- L5 ANSWER 27 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
AN 1999:177448 BIOSIS
DN PREV199900177448
TI A molecular linkage map of **tomato** based on a cross between *Lycopersicon esculentum* and *L. pimpinellifolium* and its comparison with other molecular maps of **tomato**.
AU Chen, F. Q.; Foolad, M. R. [Reprint author]
CS Department of Horticulture, The Pennsylvania State University, University Park, PA, 16802, USA
SO Genome, (Feb., 1999) Vol. 42, No. 1, pp. 94-103. print.
CODEN: GENOE3. ISSN: 0831-2796.
DT Article
LA English
ED Entered STN: 5 May 1999
Last Updated on STN: 5 May 1999
AB The wild species related to the cultivated **tomato**, *Lycopersicon esculentum* Mill., are a rich source of useful genes for germplasm improvement and varietal development. Characterization and utilization of exotic germplasm can be accelerated by the use of molecular linkage maps. Recently, we have identified an accession (LA722) within *L. pimpinellifolium* Jusl., a closely-related, red-fruited wild species of **tomato**, which exhibits a number of desirable agricultural characteristics including **salt tolerance**, disease resistance, and high **fruit** quality. The limited DNA marker polymorphism between *L. esculentum* and *L. pimpinellifolium*, however, restricts the use of the high-density molecular map of **tomato**, which was previously constructed based on a cross between *L. esculentum* and *L. pennellii* Corr., for marker-assisted identification and utilization of useful genes in LA722. To overcome this problem, we have constructed a linkage map based on restriction fragment length polymorphisms (RFLPs) which were identified between LA722 and a fresh-market **tomato** breeding line (NC84173). The mapping population (consisting of 119 BC1 individuals) was genotyped for 151 RFLP markers, including 17 germination related and 2 **potassium** transporter cDNAs. The DNA markers

spanned approximately 1192 cM of the **tomato** genome with an average distance of 7.9 cM between markers. The length of the map and the linear order of the markers were in good agreement with those of the previously published molecular maps of **tomato**, however, there were considerable differences in the distribution of recombinations along the chromosomes. Comparison of all seven published molecular maps of **tomato**, which were constructed based on different inter- and intraspecific crosses, indicated that some chromosomal regions were more stable than others in terms of the frequency of recombinations. Similarities and differences among **tomato** molecular maps are discussed in relation to phylogenetic relationships between parents of the mapping populations: In comparison, a *L. esculentum* X *L. pimpinellifolium* map should be more useful than other interspecific maps for marker-assisted exploitation of genetic variation that exists within *L. pimpinellifolium* or *L. esculentum*; the latter is because of the extensive introgression of genes from *L. pimpinellifolium* into *L. esculentum*, which occurred over time by natural means or through **plant** breeding.

L5 ANSWER 24 OF 98 CABA COPYRIGHT 2005 CABI on STN

AN 2000:36194 CABA

DN 20000307502

TI Growth, water use efficiency, and sodium and **potassium** acquisition by **tomato** cultivars grown under **salt** stress

AU Al-Karaki, G. N.

CS Department of Plant Production, Jordan University of Science and Technology, P.O. Box 3030, Irbid, Jordan.

SO Journal of Plant Nutrition, (2000) Vol. 23, No. 1, pp. 1-8. 19 ref. ISSN: 0190-4167

DT Journal

LA English

ED Entered STN: 20000414

Last Updated on STN: 20000414

AB **Tomato** cultivars Sera, 898 and Rohaba were grown in nutrient solutions containing 0, 72, 144 or 216 mM NaCl to determine effects of **salt** stress on shoot and root dry matter (DM), **plant** height, water use efficiency (WUE), shoot Na and K concentrations, and K versus Na selectivity (SK,Na). Increasing NaCl concentration in nutrient solution adversely affected shoot and root DM, **plant** height, WUE, K concentration, and K:Na ratio in all cultivars. Shoot Na concentrations increased with increasing NaCl concentration in the nutrient solution. Although increasing **salt** concentration in the solution adversely affected growth of all cultivars, Sera had higher shoot and root DM contents than the other cultivars. Shoot and root DM in cv. 898 was most affected by **salt**, while Rohaba had an intermediate **salt** sensitivity. The cultivar Sera generally had higher WUE values, shoot K concentrations, and SK,Na, but had lower shoot Na concentrations than the other cultivars. Greater Na exclusion, higher K uptake and shoot SK,Na are suggested as the **plant** strategies for **salt** tolerance.

L5 ANSWER 17 OF 98 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on

AN 2001:428171 BIOSIS

DN PREV200100428171

TI Expressing the yeast HAL1 gene in **tomato** increases **fruit** yield and enhances K⁺/Na⁺ selectivity under **salt** stress.

AU Rus, A. M.; Estan, M. T.; Gisbert, C.; Garcia-Sogo, B.; Serrano, R.; Caro, M.; Moreno, V.; Bolarin, M. C. [Reprint author]

CS Department of Irrigation and Salinity, Centro de Edafologia y Biologia Aplicada del Segura, CSIC, Campus de Espinardo, E-30100, Murcia, Spain mbolarin@natura.cebas.csic.es

SO Plant Cell and Environment, (August, 2001) Vol. 24, No. 8, pp. 875-880. print.

CODEN: PLCEDV. ISSN: 0140-7791.

DT Article

LA English

ED Entered STN: 12 Sep 2001

Last Updated on STN: 22 Feb 2002

AB The yeast HAL1 gene facilitates K⁺/Na⁺ selectivity and **salt tolerance** of cells. Ectopic expression of HAL1 in transgenic **tomato** (*Lycopersicon esculentum* Mill.) plants minimized the reduction in **fruit** production caused by **salt** stress. Maintenance of **fruit** production by transgenic plants was correlated with enhanced growth under **salt** stress of calli derived from the plants. The HAL1 transgene enhanced water and K⁺ contents in both leaf calli and leaves in the presence of **salt**, which indicates that HAL1 functions in plants using a similar mechanism to that in yeast, namely by facilitating K⁺/Na⁺ selectivity under **salt** stress.

L5 ANSWER 1 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:99256 CAPLUS

DN 142:152134

TI Use of *Arabidopsis thaliana* Na⁺/H⁺ transport protein for improved **salt tolerance** in transgenic **tomato plant fruit** with elevated **potassium** levels

IN Zhang, Hong-xia; Blumwald, Eduardo

PA Can.

SO U.S. Pat. Appl. Publ., 87 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005028235	A1	20050203	US 2003-617623	20030710
PRAI	US 2002-395637P	P	20020712		

AB The present invention relates to *Arabidopsis thaliana* NHX gene-encoded Na⁺/H⁺ transport protein for improved **salt tolerance** in transgenic **tomato plant fruit** with elevated **potassium** levels.

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STN INTERNATIONAL SESSION SUSPENDED AT 17:05:44 ON 15 APR 2005

FILE 'HOME' ENTERED AT 13:11:36 ON 29 APR 2005

=> file biosis caplus caba agricola

=> s salt and grape and toleranc?

L1 71 SALT AND GRAPE AND TOLERANC?

=> duplicate remove l1

L2 57 DUPLICATE REMOVE L1 (14 DUPLICATES REMOVED)

=> d ti 1-25

L2 ANSWER 1 OF 57 CABA COPYRIGHT 2005 CABI on STN

TI Leaf and bud responses to foliar spray of saline solutions in apple, pear, peach, and **grape**.

L2 ANSWER 2 OF 57 CABA COPYRIGHT 2005 CABI on STN

TI Effect of various irrigation regimes on shoot and root growth in different **grape** rootstocks.

L2 ANSWER 3 OF 57 CABA COPYRIGHT 2005 CABI on STN

TI Evaluation of **salt tolerance** of **grape** rootstocks under hydroponic culture conditions.

L2 ANSWER 4 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

TI Rootstock effects on **salt tolerance** of irrigated

field-grown grapevines (*Vitis vinifera* L. cv. sultana) 2. Ion concentrations in leaves and juice

- L2 ANSWER 5 OF 57 CABA COPYRIGHT 2005 CABI on STN
TI Salinity effects on vines and wines.
- L2 ANSWER 6 OF 57 CABA COPYRIGHT 2005 CABI on STN
TI Screening of **grape** rootstocks for their salinity **tolerance**.
- L2 ANSWER 7 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI Effects of salts on the physiological variance of recovery tissue in **grape**
- L2 ANSWER 8 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI Transgenic plants expressing yeast trehalose-6-phosphate synthase (TPS1) for **tolerance** of drought stress
- L2 ANSWER 9 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI plant transcription factor genes identified by sequence homology and their use in improving environmental stress **tolerance**
- L2 ANSWER 10 OF 57 CABA COPYRIGHT 2005 CABI on STN
TI Physiological response of grapevine rootstock cultivars to moisture stress.
- L2 ANSWER 11 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI Physiological characteristics of **grape**-vine rootstock in saline solution
- L2 ANSWER 12 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
TI In vitro growth and leaf composition of grapevine cultivars as affected by sodium chloride.
- L2 ANSWER 13 OF 57 CABA COPYRIGHT 2005 CABI on STN
TI Rootstock and salinity effects on rates of berry maturation, ion accumulation and colour development in Shiraz grapes.
- L2 ANSWER 14 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
TI In vitro screening of some **grape** genotypes (*Vitis* spp.) for NaCl **tolerance**.
- L2 ANSWER 15 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI Improving stress **tolerance** in plants by blocking the stress-induced cell cycle arrest by mutation of a cyclin-dependent kinase gene
- L2 ANSWER 16 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI A Na⁺/H⁺ exchanger protein of Arabidopsis and its in the development of **salt tolerance** in plants
- L2 ANSWER 17 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI Expression of calcineurin in transgenic plants to increase **tolerance** to salinity stress
- L2 ANSWER 18 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI Glufosinate ammonium; pesticide **tolerance**
- L2 ANSWER 19 OF 57 CABA COPYRIGHT 2005 CABI on STN
TI **Salt tolerance** of the Fayoumi grapevine cultivar.
- L2 ANSWER 20 OF 57 CABA COPYRIGHT 2005 CABI on STN
TI Impact of proline application on the growth of **grape** plantlets under **salt** stress in vitro.
- L2 ANSWER 21 OF 57 CABA COPYRIGHT 2005 CABI on STN
TI In vitro propagation and evaluation for **salt** stress

tolerance in some **grape** cultivars.

- L2 ANSWER 22 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI Evaluation of **salt tolerance** in vitro grown grapevine rootstock varieties
- L2 ANSWER 23 OF 57 CABA COPYRIGHT 2005 CABI on STN
TI Study on the **tolerance** of 10 **grape** cultivars at different concentrations of sodium chloride under in vitro conditions.
- L2 ANSWER 24 OF 57 CABA COPYRIGHT 2005 CABI on STN
TI International symposium on the importance of varieties and clones in the production of quality wine, Kecskemet, Hungary, 24-28 August 1997.
- L2 ANSWER 25 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
TI Effect of salinity and Ramsey rootstock on ion concentrations and carbon dioxide assimilation in leaves of drip-irrigated, field-grown grapevines (Vitis vinifera L. cv. Sultana)

=> d bib abs 21-23

- L2 ANSWER 21 OF 57 CABA COPYRIGHT 2005 CABI on STN
AN 1999:116308 CABA
DN 19990308641
TI In vitro propagation and evaluation for **salt stress tolerance** in some **grape** cultivars
AU Wafaa, H. W.; El-Hammady, A. E.; El-Saidi, M. T.; Shahin, M. F. M.
CS Department of Horticulture, Faculty of Agriculture, Ain Shams University, Shobra El-Kheima, Cairo, Egypt.
SO Arab Universities Journal of Agricultural Sciences, (1999) Vol. 7, No. 1, pp. 179-190. 22 ref.
DT Journal
LA English
SL Arabic
ED Entered STN: 19990908
Last Updated on STN: 19990908
AB Murashige and Skoog medium (MS) supplemented with 0.2 mg BA, 30 g sucrose plus 7 g agar/litre gave the best results in terms of uniform normal shoots from stem node cultures of Flame Seedless grapes. Increasing the BA concentrations to 0.5 mg litre⁻¹ was more appropriate for cultivars King Ruby and Early Superior. When the in vitro proliferated shoots were used to evaluate **salt stress tolerance**, Early Superior was the most tolerant followed by Flame Seedless and King Ruby, respectively. Survival percentages after 4 and 12 weeks in solid saline medium (2000 and 4000 ppm of NaCl, CaCl₂ and MgCl₂ salts) were significantly higher in Early Superior than in the other cultivars. The rate of regenerating new leaves and roots was also higher in Early Superior. Increasing the **salt** concentration led to an increase in proline content in all studied cultivars with the greatest increase in Early Superior.
- L2 ANSWER 22 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:436564 CAPLUS
DN 131:85627
TI Evaluation of **salt tolerance** in vitro grown grapevine rootstock varieties
AU Troncoso, A.; Matte, C.; Cantos, M.; Lavee, S.
CS Inst. Recursos Naturales Agrobiologia Sevilla, Seville, E-41080, Spain
SO Vitis (1999), 38(2), 55-60
CODEN: VITIAY; ISSN: 0042-7500
PB Institut fuer Rebenzuechtung Geilweilerhof
DT Journal
LA English
AB The response was studied of grapevine rootstock varieties to increasing **salt** concns. (0, 50, 85, 120, 155 mM NaCl) under in vitro and growth chamber conditions (explant mortality, in vitro stem elongation, bud number, and rooting ability). Varieties were divided into sensitive,

moderately tolerant, and tolerant. Increasing **salt** concns. decreased the hydration of aerial parts and roots, the decrease being smaller in tolerant varieties. Increasing concns. reduced K and, to a smaller extent, P and Ca content. With and without **salt** treatment K and P levels were lower in sensitive plants. Na and Cl accumulated to a higher extent in tolerant plants. The authors suggest that **tolerance** of in vitro grown rootstocks was due to their capacity to accumulate **salt**, to increase K concentration in the tissue and to maintain a high H₂O content.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 23 OF 57 CABA COPYRIGHT 2005 CABI on STN

AN 1999:162595 CABA

DN 19991611732

TI Study on the **tolerance** of 10 **grape** cultivars at different concentrations of sodium chloride under in vitro conditions

AU Jalili-Marandi, R.

CS College of Agriculture, University of Ouromieh, Iran.

SO Iranian Journal of Agricultural Sciences, (1998) Vol. 29, No. 3, pp. 525-533. 26 ref.

DT Journal

LA Persian

SL English

ED Entered STN: 19991208

Last Updated on STN: 19991208

AB The level of **salt tolerance** of 10 **grape**

cultivars (Bidanh safid, Sahabi, Rishbaba, Husseiny, Tabarzeh, Ghiziluzum, Lal bidaneh, Maliki, Khalili, Gharah shireh) at different concentrations of sodium chloride (0, 1, 2, 3, 4, 5, 6, 7 g/litre) was evaluated under in vitro conditions over a period of 2 years (1996-97). The experimental design was a complete randomized block with 3 replications. The results showed that the number and length of roots, the weight of fresh and dried roots significantly decreased with increasing level of **salt** concentration. The time required from initial culture of explants until the appearance of roots was prolonged with the increase of **salt** concentration. It was also observed that the length of shoots, weight of fresh and dried shoots, and number of leaves were significantly reduced. The number of days from the culture of explants until yellowing of the leaves were shortened with the increasing of salinity. Correlations between Na uptake and accumulation by the explants as well as **salt** concentration in the culture media were positive and significant. The interaction of cultivar x **salt** concentration was not significant. According to the results obtained, the degree of **salt tolerance** of the cultivars was medium and all cultivars were tolerant at 2-3 g/litre **salt**. The results showed that 6 and 7 g/litre **salt** were lethal concentrations for all examined cultivars, but Bidaneh safid showed relative **tolerance** at 6 g/litre **salt**.

=> d ti 26-50

L2 ANSWER 26 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

TI Pesticide **tolerances** for sulfonium, trimethyl-**salt** with N-(phosphonomethyl)glycine (1:1)

L2 ANSWER 27 OF 57 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN

TI Separating the effects of foliar and root **salt** uptake on growth and mineral composition of four grapevine cultivars on their own roots and on 'Ramsey' rootstock.

L2 ANSWER 28 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

TI Grapevine responses to salinity

L2 ANSWER 29 OF 57 CABA COPYRIGHT 2005 CABI on STN
 TI Improvement of **grape**.

L2 ANSWER 30 OF 57 CABA COPYRIGHT 2005 CABI on STN
 TI Advances in horticulture: fruit crops - Volume 2.

L2 ANSWER 31 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dinoseb; revocation of **tolerances**

L2 ANSWER 32 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Effects of sodium chloride treatments on the growth and mineral contents of callus induced from nine **grape** cultivars

L2 ANSWER 33 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Differences in **salt tolerance** of some fruit species

L2 ANSWER 34 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI DIFFERENCES IN **SALT TOLERANCE** OF SOME FRUIT SPECIES.

L2 ANSWER 35 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Effect of sodium chloride on the growth of **grape** in hydroponic culture and on the distribution of the two constitutive elements of this **salt**

L2 ANSWER 36 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Response to sodium chloride of grapevines regenerated from multiple-shoot cultures exhibiting mild **salt tolerance** in vitro

L2 ANSWER 37 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI **SALT TOLERANCE** OF **GRAPE** ROOTSTOCKS UNDER GREENHOUSE CONDITIONS.

L2 ANSWER 38 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI SELECTION IN-VITRO FOR SODIUM CHLORIDE **TOLERANCE** IN VITIS-RUPESTRIS.

L2 ANSWER 39 OF 57 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
 TI Response of six **grape** cultivars to the combined effects of high salinity and rootzone waterlogging.

L2 ANSWER 40 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI AGRO-TECHNIQUES FOR LOCALIZED RECLAMATION OF SOLONETZ-SOLONCHAK SODIC-SALINE SOILS FOR PLANTING OF GRAPES AND OTHER FRUITS.

L2 ANSWER 41 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI **SALT TOLERANCE** IN GRAPES 2. EFFECT OF SALINITY ON MINERAL COMPOSITION OF PLANTS.

L2 ANSWER 42 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Relative sodium chloride **tolerances** of grapevine cultivars and hybrids in vitro

L2 ANSWER 43 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 TI **Salt tolerance** in grapes. III. Effect of salinity on chlorophyll, photosynthesis and respiration

L2 ANSWER 44 OF 57 CABA COPYRIGHT 2005 CABI on STN
 TI **Salt tolerance** of fruit crops.

L2 ANSWER 45 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI INFLUENCE OF DIFFERENT CONCENTRATIONS OF SODIUM CHLORIDE AND CALCIUM CHLORIDE SALTS ON THE GROWTH OF SOME GRAPEVINE VITIS-VINIFERA CULTIVAR TRANSPLANTS.

L2 ANSWER 46 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI ACCUMULATION OF SODIUM AND CHLORIDE IN LEAVES OF SPRINKLER IRRIGATED
 GRAPES.

L2 ANSWER 47 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 TI **SALT TOLERANCE** OF ORNAMENTAL SHRUBS TREES AND
 ICEPLANT.

L2 ANSWER 48 OF 57 CABA COPYRIGHT 2005 CABI on STN
 TI Studies on the **tolerance** of some **grape** rootstocks and
 varieties to adverse environmental conditions.

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 TI **SALT TOLERANCE** IN GRAPES PART 1 EFFECT OF SODIUM SALTS
 SINGLY AND IN COMBINATION ON SOME OF THE MORPHOLOGICAL CHARACTERS OF
GRAPE VARIETIES.

L2 ANSWER 50 OF 57 AGRICOLA Compiled and distributed by the National
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 (2005) on STN
 TI **Salt tolerance** in grapes. I. Effect of sodium salts
 singly and in combination on some of the morphological characters of
grape varieties

=> d bib abs 32 33 37 39 42

L2 ANSWER 32 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1992:630343 CAPLUS
 DN 117:230343
 TI Effects of sodium chloride treatments on the growth and mineral contents
 of callus induced from nine **grape** cultivars
 AU Jeon, Eun A.; Lee, Chang Hoo; Kim, Sung Bok
 CS Korea Univ., Seoul, S. Korea
 SO Nonglim Nonjip (1991), 31, 71-80
 CODEN: NONODD
 DT Journal
 LA Korean
 AB Averaged across NaCl treatments (0-150 mM), callus growth (fresh weight) of
grape cultivars was greatest in Pione followed by Niagara,
 Campbell Early, Tanored, Concord, Cabernet Sauvignon, Kyoho, Himrod
 Seedless in that order, and least with M.B.A. Cultivars differed with
 respect to **salt tolerance**. With increasing level of
 NaCl, Na content increased in all cultivars. K contents decreased
 markedly in callus of Niagara **grape** in response to increasing
 NaCl levels, and decreased in other cultivars as well. Ca content
 differed little among treatments, whereas Mg content tended to decrease an
 NaCl concentration increased. In Niagara callus, Na was correlated neg. with K
 and pos. with Ca and Mg. A highly significantly pos. correlation between
 Na and Ca was found in Pione **grape** callus also.

L2 ANSWER 33 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1992:148463 CAPLUS
 DN 116:148463
 TI Differences in **salt tolerance** of some fruit species
 AU Hassan, Mokhtar M.; Abou El-Azayem, A. I.
 CS Dep. Hortic., Fac. Agric., Fayoum, Egypt
 SO Egyptian Journal of Horticulture (1991), Volume Date 1990, 17(1), 1-8
 CODEN: EJHCAE; ISSN: 0301-8164
 DT Journal
 LA English
 AB The effect of salinity on survival and distribution of Na⁺ and Cl⁻ in
 seedlings of eleven fruit species was studied. The seedlings were grown
 in nutrient solution salinized with 174 mM NaCl. The results demonstrated a
 wide variation in response to salinity. The relative **salt**
tolerance was in the following increasing order: apricot, peach,

almond, mango, sour orange, apple, pear, **grape**, guava, olive and date palm. Salinity increased Na⁺ and Cl⁻ in leaves and roots of the **salt** treated plants. In all the studied fruit species except date palm, Cl⁻ was relatively high in roots and low in leaves. The species, which exhibited a greater degree of **salt tolerance** than the other, contained lower Cl⁻ in the leaves. This indicated that the ability of these fruit species to tolerate salinity seems to depend on its ability for chloride exclusion. In contrast, date palm seedlings accumulated Na⁺ and Cl⁻ in the leaves and this may serve as useful function by providing osmotic solutes.

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 AN 1987:316211 BIOSIS
 DN PREV198784035718; BA84:35718
 TI **SALT TOLERANCE OF GRAPE ROOTSTOCKS UNDER GREENHOUSE CONDITIONS.**

AU ARBABZADEH F [Reprint author]; DUTT G
 CS DEP OF SOIL AND WATER SCI, UNIV OF ARIZONA, TUCSON, AZ 85721, USA
 SO American Journal of Enology and Viticulture, (1987) Vol. 38, No. 2, pp. 95-99.
 CODEN: AJEVAC. ISSN: 0002-9254.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 25 Jul 1987

Last Updated on STN: 25 Jul 1987

AB Seven **grape** rootstocks were grown in soil columns irrigated with three levels of salinity, EC of 0.45, 2.5, and 5.0 dSm⁻¹. The latter two waters were prepared by adding MgSO₄ and CaCl₂ salts to tap water with EC of 0.45 dSm⁻¹. Shoot growth, pruning weight, leaf area, and trunk diameter were significantly reduced by salinity. Reduction in shoot growth and pruning weight were more pronounced than leaf area and trunk diameter. Total cations and chloride accumulated in the leaves of grapes were different between rootstocks. Maximum ECe values (100% reduction in growth) varied from 8.9 dSm⁻¹ for 41B to 16.4 dSm⁻¹ for **Salt** Creek. Maximum ECe for Barbera (Vitis vinifera) was 11.1 dSm⁻¹. On the average, there was an 8.4% growth reduction for each 1.0 dSm⁻¹ increase in **salt** concentration above a threshold value of 1.1 dSm⁻¹. Based on percent reduction in growth, the relative **tolerance** of **grape** rootstocks could be arranged as follows: **Salt** Creek and 5BB > SO4 and 1613 > 110R and Barbera > 41B.

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AN 85:7885 AGRICOLA

DN GUA85006933

TI Response of six **grape** cultivars to the combined effects of high salinity and rootzone waterlogging.

AU West, D.W.; Taylor, J.A.

AV DNAL (81 SO12)

SO Journal of the American Society for Horticultural Science, Nov 1984. Vol. 109, No. 6. p. 844-851

Publisher: Alexandria, Va. : The Society.

CODEN: JOSHB5; ISSN: 0003-1062

NTE Includes 22 references.

DT Article

FS U.S. Imprints not USDA, Experiment or Extension

LA English

L2 ANSWER 42 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1981:477111 CAPLUS

DN 95:77111

TI Relative sodium chloride **tolerances** of grapevine cultivars and hybrids in vitro

AU Barlass, M.; Skene, K. G. M.

CS Div. Hortic. Res., CSIRO, Glen Osmond Adelaide, 5001, Australia
SO Zeitschrift fuer Pflanzenphysiologie (1981), 102(2), 147-56
CODEN: ZSPPAD; ISSN: 0044-328X
DT Journal
LA English
AB The responses of grapevine to increasing concns. of NaCl were examined in an in vitro exptl. situation where small changes in growth could be related to internal Cl⁻ levels. Proliferating shoot cultures (no roots were present) of some grapevine rootstocks and scion varieties were exposed to added **salt** concns. of 0-100 mM NaCl for ≤11 subcultures (.apprx.9 mo). Varietal differences were apparent in culture in addition to the effect of **salt**. Of the scion varieties tested, Gordo was the least vigorous and Doradillo the most vigorous, whereas all rootstocks showed a uniformly low vigor. In the presence of **salt**, there was some variation among the scion varieties in the internal Cl⁻ concns. above which growth of the cultures declined. High or low vigor may have been a contributing factor to this variation. Among the rootstocks, however, Ramsey (formerly **Salt** Creek) showed a degree of **salt tolerance** which could not be confounded by any effect of growth vigor. The potential of this system to provide a relative assessment of **salt tolerance** has been demonstrated. Such information together with whole plant studies could assist in assessment of rootstocks for areas of high salinity.

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